UNITED STATES PATENT AND TRADEMARK OFFICE

**UNITED STATES DEPARTMENT OF COMMERCE**
**United States Patent and Trademark Office**
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/684,509 | 10/15/2003 | Kil-Soo Jung | 1101.0281 | 6735 |

89980 7590 01/05/2012
NSIP LAW
P.O. Box 34688
Washington, DC 20043

| EXAMINER | |
|---|---|
| SHIBRU, HELEN | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2484 | |

| NOTIFICATION DATE | DELIVERY MODE |
|---|---|
| 01/05/2012 | ELECTRONIC |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

info@nsiplaw.com
uspto@nsiplaw.com
nsiplaw@gmail.com

| Office Action Summary | Application No. | Applicant(s) |
|---|---|---|
| | 10/684,509 | JUNG ET AL. |
| | Examiner | Art Unit |
| | HELEN SHIBRU | 2484 |

***-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --***

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *05 August 2011*.
2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.
3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

5)☒ Claim(s) *1-29 and 43-58,62-64* is/are pending in the application.
5a) Of the above claim(s) *62-64* is/are withdrawn from consideration.
6)☐ Claim(s) _____ is/are allowed.
7)☒ Claim(s) *1-29 and 43-58* is/are rejected.
8)☐ Claim(s) _____ is/are objected to.
9)☒ Claim(s) *62-64* are subject to restriction and/or election requirement.

**Application Papers**

10)☐ The specification is objected to by the Examiner.
11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
12)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a)☐ All b)☐ Some * c)☐ None of:
1.☐ Certified copies of the priority documents have been received.
2.☐ Certified copies of the priority documents have been received in Application No. _____.
3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Response to Amendment*

1. The amendments, filed 08/05/2011, have been entered and made of record. Claims 1-29 and 43-58, and 62-64 are pending, claims 30-42 and 59-61 are cancelled, and claims 62-64 withdrawn from consideration.

### *Response to Arguments*

2. Applicant's arguments with respect to claims 1, 2-5, 7, 8, 12, and 13 newly added features have been considered but are moot in view of the new ground(s) of rejection. See the rejection sets forth below.

3. Applicant's arguments with respect to claims 14, 43, 51 newly added features (i.e. “the text subtitle data comprising character data, display start time information indicating a display start time of the text subtitle data, and display style information used to convert the character data into graphic data” and “the text subtitle data stored separately from the AV data) have been fully considered but they are not persuasive.

At least Nonomura ‘778 discloses the claimed feature of the text subtitle data comprising character data, display start time information indicating a display start time of the text subtitle data, and display style information used to convert the character data into graphic data.

Nonomura discloses sub picture unit (see figure 7 for instance) which includes data showing a display position and display start and stop time for the subtitle image (see col. 5 lines 38-43). See also col. 5 lines 56-64, time code file includes subtitle display start time and subtitle display stop time. See also figure 3 and figure 7 which shows sub-picture display control sequence, start time of sub-picture. Nonomura further discloses sub-picture unit also includes rasterization unit wherein rasterization performed by generating a bitmap of the predetermined dot number from an outline font file which corresponds to each character in the subtitle character string, the obtained bitmap then being plotted on a bitmapped image (referring to display style information to convert character data into graphic data; see col. 6 lines 22-37). Nonomura further teaches sub-picture stream composed of a plurality of sub-picture units is interleaved with a video stream and an audio stream into a system stream. Furthermore Mimura does not disclose the sub-picture pack includes the audio-video file, and the audio-video file does not include the sub-picture pack. Hence each of these files is separate from each other although they are in VOBU (video object unit).

See also the rejection sets forth below.

## ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-29 and 43-50 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 1, 14, 17, 18, and 21 recites *subtitle data is overlappable* *based on AV data*. The limitation is not supported by the

disclosure of the present Application. Paragraphs 0050-0051, 0054, 0067-0068 (PG PUB) all disclose graphic data is overlapped with an image based on **video** data not AV data as claimed.

Claims 2-13 and 15-29 inherit the deficiency of independent claims 1 and 14 thereby are rejected under such.

Claim 14 recites *overlay the graphic data with the AV data to generate an image*. The limitation is not supported by the disclosure of the present Application. Paragraphs 0047 and 0117 of the present Application PG pub disclose overlaying the graphic data with the video data to generate an image. No where found in the specification the limitation of overlaying audio-visual (AV) data (or **audio data**) with the graphic data to **generate an image**.

### ***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 15 recites the limitation "the renderer" in line 6. There is insufficient antecedent basis for this limitation in the claim.

8. Claim 28 recites the limitation "the renderer" in line 3. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1-8 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirayama (US Pat. No. 6, 128, 434) in view of Nonomura (US Pat. No. 6, 046, 778).

Regarding claim 1, Hirayama teaches an information storage medium on which audio-video data and text subtitle data for providing subtitles are recorded, comprising:

AV data recorded using a plurality of clips (see figure 3B which shows audio and video data recorded using a plurality of frames; see col. 8 lines 8-18) ; and

text subtitle data for providing subtitles, the text subtitle data comprising character data (figure 3B sub-picture which contains subtitle and character, see also col. 7 line 65-col. 8 line 8; col. 17 line 43-col. 18 line 4),

wherein the text subtitle data is overlappable with an image based on the AV data (see adder 208 in figure 1 and col. 5 lines 43-52, the adder adds decoded video signal with the subtitle and character information and supplies the addition to the output terminal; see also figure 12C and col. 14 lines 15-16), and being stored separately from the AV data (see figure 3B which shows sub-picture stored separately from the audio and video data).

Claim 1 differs from Hirayama in that the claim further requires display start time information indicating a display start time of the text subtitle data, and display style information used to convert the character data into graphic data.

In the same field of endeavor Nonomura discloses sub picture unit (see figure 7 for instance) which includes data showing a display position and display start and stop time for the subtitle image (see col. 5 lines 38-43). See also col. 5 lines 56-64, time code file includes subtitle display start time and subtitle display stop time. See also figure 3 and figure 7 which shows sub-picture display control sequence, start time of sub-picture. Nonomura further discloses sub-picture unit also includes rasterization unit wherein rasterization performed by generating a bitmap of the predetermined dot number from an outline font file which corresponds to each character in the subtitle character string, the obtained bitmap then being plotted on a bitmapped image (referring to display style information to convert character data into graphic data; see col. 6 lines 22-37). Nonomura further teaches sub-picture stream composed of a plurality of sub-picture units is interleaved with a video stream and an audio stream into a system stream.

Therefore in light of the teaching in Nonomura it would have been obvious to one of ordinary skill in the art at the time the invention was made to include display start and end time of subpicture and converting different characters in to graphic in order to provide user a desired language that corresponds to the moving images.

Regarding claim 2, Hirayama teaches character font data, which are recorded separately from the plurality of clips, for graphic expression of the text subtitle data and which are usable in the text subtitle data (see col. 5 lines 33-42, col. 17 line 43-col. 18 line 8, figures 3B, 8A-B, 12A which shows JP and English font (for instance) and sub-picture data recorded separately from video data).

Regarding claim 3, Hirayama teaches wherein the text subtitle data is recorded in a separate file for each of the at least one language (see col. 8 lines 3-8), and wherein when the text subtitle data is of multiple languages, the text subtitle data is recorded in separate spaces for each of the multiple languages (see figures 3A, 3B, 5A, 5B, sub picture data recorded separately, and see col. 7 lines 61-65, col. 10 lines 57-66, Picture#0, Picture#1, Picture #2.... are recorded separately).

Regarding claim 4, Hirayama discloses the text subtitle data comprises the character data which is convertible into the graphic data and output synchronization information for synchronizing the graphic data with the AV data (see col. 6 lines 31-48, col. 9 line 59-col. 10 line 20, the user is able to see image in a given language, see col. 16 lines 38-40, subtitle image; video information and the corresponding sub picture image displayed, hence synchronization information outputted, see also claim 1 rejection above).

Regarding claim 5, Hirayama discloses the text subtitle data comprises the character data which is convertible into the graphic data (see figures 5A, 5B, 8B, col. 6 lines 31-48, col. 9 line 59-col. 10 line 20, the user is able to see image in a given language, see col. 16 lines 38-40, subtitle image, the sub picture are converted to subtitle image for the user to see the image) and output location information indicating a location in which the graphic data is to be displayed when the graphic data is overlapped with an image according to the AV data (see figures 8B, 12C where the prior art shows position of the sub picture and the video in the display device; hence position information outputted to place the words in specific location on the display device, see also col. 11 line 64-col. 12 line 7).

Regarding claim 6, Hirayama teaches the text data comprises the character data which are convertible into the graphic data and information for expressing the output of the graphic data when the graphic data is overlapped with an image (see figures 5A, 5B, 8B, col. 6 lines 31-48, col. 9 line 59-col. 10 line 20, the user is able to see image in a given language, see col. 16 lines 38-40, subtitle image, the sub picture are converted to subtitle image for the user to see the image; Nonomura teaches the text data includes character data which are convertible into graphic data and information for expressing the output of the graphic data in a plurality of sizes when the graphic data is overlapped with an image (see col. 6 lines 20-55, see figure 7, SPUH which includes the size of the sub picture unit, 30, and col. 7 line 26-43).

Regarding claim 7, Hirayama discloses the AV data are divided into units that are continuously reproducible; and a size of all of the text subtitle data corresponding to one unit is limited (see figure 3B which shows data unit includes audio and video data (frame #0 to frame #30; col. 8 lines 8-17 pictures corresponding to the video in the specific data unit have limited size (or the sub picture are not limitless), frame #0-frame#30 reproduced continuously).

Regarding claim 8, Hirayama discloses the AV data is divided into a plurality of units that are continuously reproducible, the text subtitle data corresponding to each reproducing unit being divided into a plurality of language sets, a size of all of the text subtitle data forming one language set being limited ((see figure 3B which shows data unit included video data (frame #0 to frame #30) which are continuously reproducible till frame #30 (in NTSC for instance) and till data unit #7199; col. 8, pictures corresponding to the video in the specific data unit have limited size (or the sub picture are not limitless) and are in plural language).

Regarding claim 12, Hirayama discloses the information storage medium is a removable type (see figure 3A OPTICAL DISK 10).

Regarding claim 13, Hirayama discloses the information storage medium is an optical disc which is readable by an optical apparatus of the reproducing apparatus (see figure 1 recording reproducing apparatus where the optical disk reproduced, see also col. 5 lines 18-41 and figure 3A).

11. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirayama (US Pat. No. 6, 128, 434) in view of Nonomura (US Pat. No. 6, 046, 778) and further in view of Seng (US PG PUB 2001/0025320).

Regarding claim 9, although the combination of Hirayama and Nonomura teaches recording multi language character set, the combination fails to specifically state expressing and recording the text subtitle data in Unicode.

In the same field of endeavor Seng teaches Unicode standard (a “universal linguistic encoding type) that provides the capacity to encode all the characters used in the written languages of the world (see paragraph 0054).

Therefore in light of the teaching in Seng it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Hirayama by providing Unicode encoding system in order to avoid overlapping code space for different language scripts without extensive software rewrites by recording the text data in Unicode system.

Regarding claim 10, Seng teaches the text subtitle data for subtitles are formed only with characters of one of: ASCII, which is a basic English character set (see paragraphs 0053-0054, 0059, and 0065), and ISO8859-1, which is a Latin-extended character set (see paragraphs 0115-0116), the text subtitle data being coded and recorded by using UTF-8 by which one character is coded into a plurality of 8-bit units (see paragraphs 0060-0062).

Regarding claim 11, Seng teaches the text subtitle data comprises a character having a code point value of a 2-byte size in Unicode, the text subtitle data being coded and recorded by using UFT-16 by which one character is coded into a plurality of 16-bit units (see paragraphs 0060-0062).

12. Claims 14-21, 25-26, 28-29 and 43-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura (US Pat. No. 6, 345, 147) in view of Nonomura (US Pat. No. 6, 046, 778) and further in view of Nonomura (6, 574, 419 hereinafter referred to as Nonomura2).

Regarding claim 14, Mimura teaches a reproducing apparatus which reproduces data from an information storage medium on which audio-video data is recoded (see claim 5 where the prior art cites a reproducing system reproducing main picture information and audio information from recording medium, see also figure 15, pick up section 103 and motor 102, pick up drive section 104), the audio-video data being coded and divided into a plurality of clips which are recording units (see figure 4 video object unit (VOBU) and col. 4 lines 20-27 and 32-36; see also figures 5 and 6) and on which text subtitle data is recorded, the text subtitle data being stored separately from the AV data (see figure 4 sub picture pack (SP_PCK), and figures 11A and 11B) and overlappable as graphic data with an image based on the AV data (see adder 208 in figure 15 where the video data and the subpicture data combined, see also col. 10 lines 23-28), the reproducing apparatus comprising:

a decoding block configured to decode the coded audio-video data read from the information storage medium(see figure 15 video decoder 206 and audio decoder 213);

overlay the graphic data with the audio-video data to generate an image (see figure 15 adder 208 where the video and sub picture combined, see also col. 10 lines 23-35), and wherein the said text subtitle data comprises character data (see abstract, col. 7 lines 36-47).

Claim 14 differs from Mamura in that the claim further requires converting the text subtitle data into graphic data and a second buffer configured to store the text subtitle data; and display start time information indicating a display start time of the text subtitle data, and display style information used to convert the character data into graphic data.

In the same field of endeavor Nonomura discloses converting text file into graphics (see figure 1 and col. 6 lines 20-38 where the prior art discloses creating subtitle image using rasterization unit 2). Nonomura further teaches superimposing the subtitle image on moving images reproduced from the video stream (see abstract). Nonomura further teaches outline font file which includes outline fonts (see figure 1 unit

8 where text file stored; see also col. 5 lines 65-67). Nonomura further discloses sub picture unit (see figure 7 for instance) which includes data showing a display position and display start and stop time for the subtitle image (see col. 5 lines 38-43). See also col. 5 lines 56-64, time code file includes subtitle display start time and subtitle display stop time. See also figure 3 and figure 7 which shows sub-picture display control sequence, start time of sub-picture. Nonomura further discloses sub-picture unit also includes rasterization unit wherein rasterization performed by generating a bitmap of the predetermined dot number from an outline font file which corresponds to each character in the subtitle character string, the obtained bitmap then being plotted on a bitmapped image (referring to display style information to convert character data into graphic data; see col. 6 lines 22-37). Nonomura further teaches sub-picture stream composed of a plurality of sub-picture units is interleaved with a video stream and an audio stream into a system stream.

Therefore in light of the teaching in Nonomura it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mimura by converting text subtitle data into graphic in order to provide a user a visual image on the display device, and to include display start and end time of subpicture and converting different characters in to graphic in order to provide user a desired language that corresponds to the moving images.

Claim 14 further differs from the above combination in that the claim further requires a buffer configured to temporarily store audio-video data.

In the same field of endeavor Nonomura2 discloses AV decoder section 85, audio buffer (99), video buffer (96) and sub video buffer (105) in figure 23. Nonomura2 further teaches audio decoder, video decoder and sub video decoder (100, 87 and 98 respectively in figure 23); and a video mixing section where the sub video and the video mixed up. Nonomura further teaches a video tile corresponds to a video clip album including one or more video clips (see figure 4 and col. 6 line 66-col. 7 line 3).

Therefore in light of the teaching in Nonomura it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above proposed combination by adding buffer in order to store the data in a temporarily storage unit before decoding and outputting and to manage graphical display by storing the data temporarily in buffer to control overflow and underflow of data.

Regarding claim 15, Nonomura teaches font data are stored in outline font file 10 and being usable in the text subtitle data for graphic expression of the text subtitle data and recorded separately from the clips on the information storage medium, and a renderer is further configured to convert the text subtitle data into the graphic data using the font data (see col. 6 lines 22-37 where Nonomura teaches rasterizing the subtitle character string using outline fonts and compresses the obtained bitmapped image according to run-length encoding to create a subtitle image). See also Nonomura2 highlight buffer 94 in figure 23.

Regarding claim 16, Nonomura2 teaches a third buffer configured to temporarily store font data (see highlight buffer 94 in figure 23) Nonomura teaches font data for converting the text subtitle data into graphic data (see Nonomura col. 6 lines 22-37 where Nonomura teaches rasterizing the subtitle character string using outline fonts and compresses the obtained bitmapped image according to run-length encoding to create a subtitle image, outline font file located in unit 10), and Mimura teaches when the text subtitle data are data of multiple languages (see figures 9A-9B, 11A-11B, 12, 16A-16B), the text subtitle data are recorded in separate spaces for each of the languages (see figures 11A-11B and figures 16A-16B, stream number 0 is for Japanese, stream number 1 is for English so on), text subtitle data for a language that is one of selected by a user and set as an initial reproducing languages are temporarily stored in the second buffer (the sub video stream of Nonomura2 is used for displaying subtitles or for displaying a button on the video, hence it is inherent that the buffer stores user selected subtitles to be displayed on the display device together with the video, see col. 7 lines 27-34); and simultaneously, while reproducing audio-video data, the text subtitle data is converted into the graphic data and the graphic data is output (see col. 12 line 54-col. 13 line6 of Mimura, subtitle image is outputted while reproducing video data for the user to see the image; see also Nonomura sub-picture display control sequence table 33, and col. 9 line 64-col. 10 line 8, generation unit 6 generates sub picture sequence table, display of each subtitle for a movie usually starts and stops at a given time, see also col. 7 lines 47-col. 8 line 13).

Regarding claim 17, Nonomura teaches a controller configured to control the display start time and display end time indicating a display end time of the of the text subtitle data using synchronization information, wherein the text subtitle data are recorded on the information storage medium, the text subtitle data comprising the synchronization information (see col. 5 lines 56-63, col. 7 lines 26-43, col. 8 lines 5-7 and col. 10 lines 14-19), by which the text subtitle data are converted into the graphic data which are overlapped with an image based on the audio-video data (see col. 5 lines 39-47 and col. 6 lines 20-38). See also Mimura col. 10 lines 42-49.

Regarding claim 18, Nonomura teaches a controller configured to control a location where the text subtitle data is overlapped with an image based on the audio-video data using output location information, wherein the text subtitle data are recorded on the information storage medium, the text subtitle data comprising character data which are convertible into graphic data, and wherein the output location information indicating a location where the graphic data is to be output when the graphic data is overlapped with an image based on the audio-video data, is recorded on the information storage medium (see figure1 display position calculation unit 5, figures 7 PXD 32, figures 4-6 and col. 8 lines 14-24 and see also rejection of claim 14).

Regarding claim 19, Nonomura2 teaches the video data recorded on the information storage medium are divided into units that are continuously reproducible, and within a limited size of all of the text data corresponding to the recording unit, the text data are recorded, all of the text data whose size is limited is stored in the second buffer before reproducing the continuously reproducible units (see col. 23 lines 34-44 limited size of text provided to be reproduced and/or buffered); and when a language change occurs during reproduction, subtitle data corresponding to the language stored in the buffer is output (it is inherent that when change of language requested, subtitle corresponding to the selected language outputted).

Regarding claim 20, the combination of Mimura, Nonomura and Nonomura2 teaches the audio-video data is divided into units that are continuously reproducible, the text subtitle data corresponding to one unit are divided into a plurality of language sets, the text subtitle data for subtitles forming the one language set are recorded so that all of the text subtitle data is limited; the text subtitle data corresponding to a language set containing the subtitle data which are output simultaneously with audio-video data, are stored in the buffer before reproducing the unit that is continuously reproducible; when a language change occurs during reproduction (see rejections of claims 14-19 above), when the text subtitle data for the language are in the buffer, the text subtitle data for the language are output; and when the text subtitle data for the language are not in the buffer, the text subtitle data corresponding to the language set containing the text subtitle data for the language are stored in the buffer and the text subtitle data for the language are output (buffering continues in order to output user selected video and subtitle image and selected subtitle and video data are inputted to the buffer and to the decoder, it is inherent that if the buffer does not have the currently selected data, the selected data is provided to the buffer to be outputted, see also Mimura col. 11 lines 30-51 and col. 12 lines 17-47).

Regarding claim 21, Mimura teaches a subtitle size selector configured to select a size of the subtitle data based on a user input, wherein the text subtitle data comprises character data, which are convertible into graphic data, and information indicating the output of a plurality of graphic data items when the graphic data is overlapped with an image based on the audio-video data are recorded on the information storage medium (see figures 16A-16B and col. 10 lines 57-col. 11 line 9). See also Nonomura figure 7 SPUH where the size of the subtitle stored and col. 6 lines 20-39.

Regarding claim 25, Mimura the information storage medium comprises a removable type (see DVD 100 in figure 1, data recorded in optical disk); and the reproducing apparatus is further configured to read data from and reproduce data on the removable information storage medium (see figure 15 recorded data reproduced from unit 100).

Regarding claim 26, Mimura discloses the information storage medium comprises an optical disc which is readable by an optical apparatus of the reproducing apparatus; and the reproducing apparatus further configured to read and reproduce data recorded on the optical disc (see figure 1 disk 100, optical disk, and figure 15 which shows data recorded in the optical disk read, see also col. 3 lines 41-48).

Regarding claim 28, Mimura discloses the subtitle data further comprises subtitle data for one or more languages (see figures 11A and 11B which shows example of sub-picture stream having multiple language); and Nonomura discloses the renderer configured to convert the text subtitle data for the one or more languages into graphic data (see col. 6 lines 20-45 multiple language converts to graphic data).

Regarding claim 29, Mimura discloses the subtitle data are synchronously overlapped with a video image and then output (see figure 15 adder 208 where the video and sub picture combined and outputted, see also col. 10 lines 23-29).

Regarding claim 43, the limitation of claim 43 can be found in claim 14. Therefore claim 43 is analyzed and rejected for the same reasons as discussed in claim 14 above. It is also noted that Mimura teaches audio data and decoding and outputting the audio data, see figure 4 A_PCK, figure 15 audio decoder and audio output, such as unit 212. See also col. 10 lines 26-34 and claim 5 and claim 12, and Mimura teaches the text data being recorded separately from audio-visual (AV) data (see figure 4 of Mimura and the above response).

Regarding claim 44, Mimura teaches the subtitle image data with the video information using synchronization information included in the decoded AV data (the subtitle data reproduced with its corresponding AV data, it is inherent that synchronization information included to reproduce the subtitle with its corresponding AV data and inputted into adder, see figure 15 and col. 10 lines 16-34). See also Nonoumra col. 7 line 58-col. 8 line 23. See Nonoumra2 col. 18 line 49-col. 19 line 23, ASVOB decoded in accordance with the PTS in the packet, and see col. 25 lines 4-6.

Regarding claim 45, Nonomura discloses the text subtitle data comprises display area information, the display style information and information indicating a language (see figure 7 which shows sub picture unit includes sub picture header, pixel data and control sequence table, see also figures 4-6, see also Mimura figures 11A-B, 12,18 and 20).

Regarding claim 46, Nonomura discloses the display area information designates a location on which rendered subtitle image data are displayed on a screen (see figures 4A and 4B which shows display position and figures 5-7 as well).

Regarding claim 47, Nonomura discloses the display style information comprises information regarding at least one of: a size of displayed characters, a writing of rendered subtitle image data in horizontal lines and/or vertical lines, an arrangement, colors, and a contrast in the display area (see figures 4-7, the SPU includes pixel data, header, see col. 6 line 22-col. 7 line 25; see also Mimura figures 16A-B and figure 18).

Regarding claim 48, Nonomura2 discloses loading the subtitle data into a buffer (see figure 23 sub video buffer where the subtitle data loaded into).

Regarding claim 49, Mimura discloses the AV data, the text subtitle data, and the font data are stored in an information storage medium readable by the reading section (see figure 1 which shows disk 100, see figure 4 which shows audio pack, video pack and sub-picture pack in the storage medium, see figures 16A-B and 18 which shows menu screen comprises sizes of each stream).

Regarding claim 50, Mimura teaches blending yields a video having subtitles displayed thereon (see figure 15 the video outputted from video decoder and sub picture from unit 207 blended and displayed together, see also col. 10 lines 16-34 and col. 11 lines 30-51 and claim 12). See also Nonomura figures 5-6.

Regarding claim 51, the limitation of claim 51 can be found in claims 14 and 43. Therefore claim 51 is analyzed and rejected for the same reasons as discussed in claims 14 and 43 above.

Regarding claim 52, Nonomura2 teaches a buffer section configured to buffer between the reading section and the decoding section (see figure 23) and rendering section (see Nonomura teaches rendering section and Mimura teaches decoding before adding the subtitle with the video data). It is obvious to add Nonomura's rendering section into Nonomura2 device and/or into Mimura’s device (with Nonomura2 buffer). See also claim 14 rejection.

Claims 53 and 55 are rejected for the same reasons as discussed in claim 49 above.

Regarding claim 54, Nonomura teaches at least one of the text subtitle data and the font data are stored in a downloadable database (see col. 5 lines 22-37, the workstation is equipped with CPU, a memory, an HDD and a display). See also Mimura’s figure 15 and Nonomura2 figure 23 which shows buffer memory.

Regarding claim 56, Nonomura teaches the rendering section is further configured to find a font matching a character code of each character in the text subtitle data, the fonts being stored in one of a downloadable database and in a storage section of the apparatus (see col. 6 lines 20-55 and col. 5 lines 22-37; see also col. 8 and claim 54 rejection just above).

Regarding claim 57, Mimura discloses the text file comprises data for each of one or more languages and the text subtitle data comprises information indicating one of the one or more languages (see figures 9A-B, 12, 18, and col. 6 lines 32-56 and col. 7 lines 25-46).

Regarding claim 58, Mimura discloses the text file comprises data for each of one or more languages, the text subtitle data is one of stored as multiplexed data in an area and stored in separate areas for each of the one or more languages (see figures 4, 12, 15 and col. 8 lines 45-62; see also col. 7 lines 47-62).

13. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura (US Pat. No. 6, 345, 147) in view of Nonomura (US Pat. No. 6, 046, 778) and further in view of Nonomura (6, 574, 419 hereinafter referred to as Nonomura2) and Seng (US PG PUB 2001/0025320).

Regarding claim 22, although the above combination teaches recording multi language character set, and the renderer is further configured to convert the characters into graphic data (see rejection of claim 14 above), the combination fails to specifically state expressing and recording the text subtitle data in Unicode.

In the same field of endeavor Seng teaches Unicode standard (a “universal linguistic encoding type) that provides the capacity to encode all the characters used in the written languages of the world (see paragraph 0054).

Therefore in light of the teaching in Seng it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the above combination by providing Unicode encoding system in order to avoid overlapping code space for different language scripts without extensive software rewrites by recording the text data in Unicode system.

Regarding claim 23, Seng teaches the text subtitle data are formed only with characters of one of ASCII, which is a basic English character set (see paragraphs 0053-0054, 0059, and 0065), and ISO8859-1, which is a Latin-extended character set (see paragraphs 0115-0116), the text subtitle data being coded and recorded by using UTF-8 by which one character is coded into a plurality of 8-bit units (see paragraphs

0060-0062); and Nonomura teaches the renderer is further configured to convert the characters expressed into graphic data (see rejection of claim 14 above). Using UTF-8 is thought by Seng for a plurality of language.

Regarding claim 24, Seng teaches the text subtitle data comprises a character having a code point value of a 2-byte size in Unicode, the text subtitle data being coded and recorded by using UFT-16 by which one character is coded into a plurality of 16-bit units (see paragraphs 0060-0062), and Nonomura teaches the renderer is further configured to convert the characters expressed into graphic data (see rejection of claim 14 above). Using UTF-16 is thought by Seng for a plurality of language.

14. Claim 27, is rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura (US Pat. No. 6, 345, 147) in view of Nonomura (US Pat. No. 6, 046, 778) and further in view of Nonomura (6, 574, 419 hereinafter referred to as Nonomura2) and Official Notice.

Regarding claim 27, although the combination of Mimura, Nonomura and Nonomura2 fails to specifically teach outputting the graphic data without reproducing audio-video data recorded on the information storage medium, it is notoriously well known in the recording and reproducing art to output subtitle image with out the audio-video data from the storage medium.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to output only graphics data in order to edit the graphics data only if the user desires to do so.

Supporting evidences were provided in the last Office Action and below as well.

Prior art Hong (US Pat. No. 5, 943, 064) teaches selecting graphics only mode as shown in figure 4A step 78 to display graphics.

Kou (US PG PUB 20030192062) teaches the mixer circuit 44 displaying only on-screen graphics from graphics source 48 (see figure 2).

Tojima (US PG PUB 2002/0018054) teaches in paragraphs 0148-0149 turning off the moving image data and on the graphics data to output only the graphics data.

### *Election/Restrictions*

15. Newly submitted claims 62-64 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claims 62-64 recite the feature of "font data for graphic expression of the text subtitle data recorded separately from the AV data and the text subtitle data." The original claims do not require the feature underlined above.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 62-64 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### *Conclusion*

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HELEN SHIBRU whose telephone number is (571)272-7329. The examiner can normally be reached on M-F, 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, THAI Q. TRAN can be reached on (571) 272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HELEN SHIBRU/
Examiner, Art Unit 2484
December 17, 2011